



# **STATUS OF THE IZAÑA BSRN STATION**

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The Izaña Observatory (IZA BSRN #61) is part of the Global Atmospheric Watch (GAW-WMO) since 1984 programme and is managed by the Izaña Atmospheric Research Center (IARC) from the State Meteorological Agency (AEMET, Spain) (more information: https://aemet.izana.es). It is located in Tenerife Island (Canary Islands; 28º18' N, 16º29' W, 2.367 m a.s.l) above a quasi-permanent inversion layer with excellent conditions for in situ and column measurements of trace gases and aerosols under "free troposphere" conditions. The environmental conditions (stable total column ozone, very low precipitable water vapour and low aerosols content) and the high frequency of clean and pristine skies make IZA an optimal site for calibration and validation activities. In fact, IZA is a WMO-Measurement Lead Centre for Aerosols and Water Vapour Remote Sensing Instruments (<u>https://testbed.aemet.es</u>) and hosts the WMO Regional Brewer Calibration Center for Europe (RBCC-E; <u>http://rbcce.aemet.es/</u>). The radiation site at Izaña is part of BSRN since March 2009 (<u>https://bsrn.aemet.es</u>/).



WRMC-BSRN World Radiation Monitoring Center- Baseline Surface Radiation Network WORLD METEOROLOGICAL ORGANIZATION



**Net Radiation** 

Figure 1.- (a) Image of Izaña Observatory (@ICOS-ERIC) and (b) Location of the Izaña station (IZA BSRN #61) on a global map of all BSRN stations (http://bsrn.awi.de).



#### **Basic measurements**

- **Global shortwave radiation (SWD)**
- Direct Radiation (DIR)
- Diffuse Radiation (DIF)
- Longwave downward radiation (LWD)

### **Extended measurements:**

- Ultraviolet measurements (UV-A and UV-B)
- Shortwave upward radiation (SWU)
- Shortwave longwave radiation (SWD)
- Net Radiation

## **Additional measurements**

- Radiosonde data
- Total column ozone

















Set-up for the slit function determination. The characterization of the slit function is performed illuminating the entrance slit of a spectrophotometer with the monochromatic light of a VM-TIM He-Cd laser.

Set-up for the absolute irradiance calibration by calibrated standard lamps in a horizontally oriented position.

Set-up for the spectral response calibration. It is used to quantify the spectral response of a radiometer.



Figure 3.- Time series of global, direct and diffuse radiation between 2010 and 2023 at IZA BSRN.

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